Section 1: Identification of the Material and Supplier

Product Name: **Smart Sign Safe Graffiti Remover Wipes**

Other Names: Polyester/rayon fabric sheets soaked in mixed solvents containing surfactants.

Proper shipping name (ADG Code): Flammable liquid, n.o.s. (ethanol, d-limonene)

Recommended use: For the removal of graffiti.
Use as directed on the product label.
Always wear suitable gloves when handling wipes.

Supplier: **Smart Distribution Services Australia,**
ACN: 079 072 227 ABN: 57 079 072 227
Factory 2, 69 Crissane Road, HEIDELBERG WEST VIC 3081
Tel: +61 3 9459 8990 (business hours)
Fax: +61 3 9459 8951

Emergency Phone Numbers:

General Information:	**0409 140 662**	(Mobile)
Transport/Fire Emergency:	**000**	(Emergency services)
Medical Emergency:	**131126**	(Poisons Information Centre)

Section 2: Hazards Identification

Hazardous according to criteria of Worksafe Australia.

Dangerous Goods.

Risk Phrases:

R: 11	Highly flammable.
R: 22	Harmful if swallowed.
R: 38	Irritating to skin.
R: 41	Risk of serious eye damage.
R: 43	May cause sensitisation by skin contact.
R: 52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S: 2	Keep out of the reach of children.
S: 7	Keep container tightly closed.
S: 16	Keep away from sources of ignition - No smoking.
S: 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S: 28	After contact with skin, wash off immediately with plenty of water.

S: 36/37/39	Wear suitable protective clothing, gloves and eyes/face protection.
S: 46	If swallowed, seek medical advice immediately and show the container or label.
S: 60	This material and its container must be disposed of as hazardous waste.
S: 61	Avoid release to the environment. Refer to special instructions / Material Safety Data Sheets.

Section 3: Composition/Information on Ingredients

Ingredients:

Fabric:

A woven polyester/rayon fabric.

Solvent:

Ethanol	[64-17-5]	30 - 60 %
Ethylene glycol monobutyl ether	[111-76-2]	10 - 30 %
Nonyl phenol ethoxylate (Teric N9)	[9016-45-9]	10 - 30 %
N-Methyl-2-pyrrolidone	[872-50-4]	10 - 30 %
d-Limonene	[5989-27-5]	< 10 %
Other ingredients deemed not to be hazardous		to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: If swallowed, do not induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes.

Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

Recommended: Eye wash. Hand wash basin.

Advice to Doctor:

Product contains a moderate proportion of an ethylene glycol monoalkyl ether, a moderate proportion of mixed surfactants, and a low proportion of d-limonene, absorbed into polyester/rayon woven fabric sheets. If swallowed, vomiting should not have been induced because of risk of aspiration of froth into the lungs. May cause serious eye damage. d-Limonene may cause sensitisation by skin contact. Contact Poisons Information Centre.

Aggravated medical conditions:
Pre-existing skin disorders. Liver or kidney disfunction.
Prior sensitisation to d-limonene.

Section 5: Fire fighting Measures

HAZCHEM Code:	3[Y]E
Evacuate:	Yes.
Extinguishant:	Foam (alcohol-resistant) or dry agent.
Risk of violent reaction or explosion:	Yes. Vapour/air mixtures may be flammable. Vapours will be heavier than air - risk of remote ignition.
Products of combustion:	Oxides of carbon, water vapour, oxides of nitrogen.
Protective Equipment:	Breathing apparatus and protective gloves for fire only.

Section 6: Accidental Release Measures

Emergency Procedures:
Shut off all sources of ignition.
Increase ventilation.
Contain.
Prevent spillages from entering drains or natural waters.

For large spills:
Contain spillage using sand or earth. Transfer liquid and solids to suitable closed container. Treat residues as for small spillage.

For small spills:
Transfer wipes to suitable closed container. Wash site of spillage thoroughly with water and detergent. Ventilate area to dispel any residual vapours.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes. Do not breathe vapours.
Keep away from oxidising agents, sources of ignition.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a bunded flammables store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from sources of ignition. Prevent vapours from collecting in enclosed or low lying places. Keep away from oxidising agents. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Oxidising agents.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA:	Ethanol	1,000 ppm,	1,880 mg/m³
	Ethylene glycol monobutyl ether	25 ppm,	121 mg/m³
	N-Methyl-2-pyrrolidone	25 ppm,	103 mg/m³
	Not assigned by NOHSC, but see also:		
	d-Limonene		110 mg/m³ [Germany]
ES-STEL:	N-Methyl-2-pyrrolidone	75 ppm,	309 mg/m³
	Not assigned by NOHSC, but see also:		
	Ethanol	1,250 ppm,	2,400 mg/m³ [Finland]
	Ethylene glycol monobutyl ether	75 ppm,	350 mg/m³ [Finland]
ES-PEAK:	None assigned.		
Notations:	Ethylene glycol monobutyl ether		Skin
	N-Methyl-2-pyrrolidone		Skin
	Not assigned by NOHSC, but see also:		
	d-Limonene		Skin, Sens [Germany]

[Skin] indicates that this material may be absorbed via unbroken skin, and any such contact may invalidate the TLV.
[Sens] indicates that this material is a known sensitiser and may cause a specific immune response in some individuals.

Biological Limit Values: No data found.

Engineering Controls:

Use **only** flame proof equipment.
Ensure adequate ventilation (same as outdoors) when using.
If handling industrial quantities or if aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible, and at least below the TLVs.

Personal Protective Equipment:

Avoid contact with skin and eyes. Do not breathe vapours.
Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
Gloves, rubber or plastic
Impervious overalls.

Industrial Quantities:

Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance:	Clear to slightly cloudy, liquid, absorbed onto fabric.	
Odour:	Mostly citrus.	
pH:	No data.	
Vapour Pressure:	No data.	
Vapour Density:	Vapours will be heavier than air.	
Boiling Point:	From about 78 °C	
Melting Point:	No data.	
Volatiles:	About 76 %	
Volatile Organic Compounds (VOC):	About 76 %	
Evaporation Rate:	No data.	
Solubilities:	Soluble in water.	
Specific Gravity/Density:	0.88 g/mL @ 20 °C	
Flash Point:	20 °C	
Flammable Limits:	3.3 - 19.0 %	[ethanol]
	0.7 - 6.1 %	[d-limonene]
Dust Explosion:	Not applicable.	
Auto-ignition Temperature:	238 °C	[ethylene glycol monobutyl ether]

Other Information:

Flammable liquid, absorbed onto a woven fabric. Contact with strong oxidising agents may cause fire. May absorb moisture from the air. Sensitive to air and light. Slippery when spilled.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible materials, sources of ignition, heat, light, air.

Incompatible Materials: Oxidising agents, caustic alkalis.

Hazardous Decomposition Products: Oxides of nitrogen.

Hazardous Reactions: Contact with strong oxidising agents may cause fire.

Section 11: Toxicological Information

Health Effects:
No data available for the mixture. Information presented relates to individual ingredients.

Acute:

Swallowed: Harmful if sucked. Bitter taste.
Small quantities may cause a reddening of the face and neck, and symptoms of alcohol intoxication, headache, dizziness, dullness, gastric disorders and central nervous system depression. May cause abdominal pain, nausea and vomiting.
As aspiration risk.

Skin: Irritating to skin. May cause redness, itching and pain. May be absorbed through the skin.

Eyes: Irritating to eyes. May cause redness and pain. May cause painful sensitisation to light. Splashes into the eye may cause serious tissue damage.

Inhaled: May cause symptoms of central nervous system depression, dizziness, dullness, headache. May cause cough, drowsiness, nausea.

Chronic: Prolonged exposure to ethanol may affect the liver, kidneys and central nervous system.
Prolonged exposure to ethylene glycol monobutyl ether may damage the liver, kidneys, lungs, and lead to anaemia.
Ethylene glycol monobutyl ether is reported to have caused adverse reproductive effects in experimental animals, both male and female. **(1)(2)(3)**
Ethylene glycol monobutyl ether is classified as carcinogenic by RTECS criteria (2 years inhalation exposure to mice caused liver tumours). **(4)(5)**
Ethylene glycol monobutyl ether is reported as a confirmed animal carcinogen. **(6)**

LD_{50} :	Ethanol	7,060 mg/kg oral, rat.
	Ethylene glycol monobutyl ether	470 mg/kg oral, rat. 220 mg/kg skin, rabbit.
	Nonyl phenol ethoxylate	2 - 3,000 µL/kg oral, rat.
	N-Methyl-2-pyrrolidone	3,914 mg/kg oral, rat.
	d-Limonene	4,400 mg/kg oral, rat.
LDLo:	Ethanol	1,400 mg/kg oral, human.
	Ethylene glycol monobutyl ether	143 mg/kg oral, human.
TDLo:	Ethanol	1,340 µL/kg oral, man.

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Persistence and degradability: One of the surfactants in this product is not considered to be readily biodegradable. The woven fabric is not considered to be readily biodegradable.

Mobility: Readily transported by water. Volatile components will evaporate to atmosphere.

Environmental Fate: No data.

Bioaccumulative potential: No data.

Other adverse environmental effects: Contains surfactants. Local concentrations will be harmful to aquatic organisms, including fish. The fabric will persist in the environment for a very long time.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to drains, natural waters or the environment. Used wipes, after solvent has evaporated, may be disposed of as garbage.

Special precautions for landfill or incineration:
High temperature incineration, with nitrogen oxide scrubbers. May be suitable for some landfill sites after solvents have evaporated.

Section 14: Transport Information

UN Number:	UN 1993
UN Proper shipping name:	Flammable liquid, n.o.s. (ethanol, d-limonene)
Class and subsidiary risk:	3 Flammable liquid.
Packaging group:	II
Special precautions for user:	Do not store or transport with dangerous goods of classes 1, 2.1 (in bulk), 2.3, 4.2, 5.1, 5.2, 7. Contain spillages.
HAZCHEM Code:	3[Y]E
Material for export:	Regulated. Refer to **IMO/IMDG** and **IATA/ICAO**.

Section 15: Regulatory Information

Poisons (SUSDP): Schedule 6
Ethylene glycol monobutyl ether > 10 %

Dangerous Goods: Yes. UN 1993 3/II 3[Y]E

Carcinogen:	**Australia**	**IARC**	**NTP**	**RTECS**
	No.	No.	Yes. **(4)**	Yes. **(4)(5)**

Agricultural and Veterinary Chemicals Act: Not applicable.

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other Information

Date of MSDS preparation: December 2008

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany, (*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer.
NPT - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.
HSE - Health and Safety Executive (United Kingdom).

Literature references:

(1) *National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) NIH-93-3349.*

(2) *Environmental Health Perspectives. (U.S. Government Printing Office, Supt of documents, Washington, DC 20402) v.57, p.47, 1984.*

(3) *National Technical Information Service. (Springfield, VA 22161) OTS0571237.*

(4) *National Toxicology Program Technical Report Series. (Research Triangle Park, NC 27709) NTP-TR-424, 2000.*

(5) *National Technical Information Service. (Springfield, VA 22161) PB#2000-105865.*

(6) *The Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) booklet issues by the American Conference of Governmental Industrial Hygenists (ACGIH), Cincinnati, OH. TLV/BEI, 2007.*

Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.